

Applicants: Taka Aki Sato and Junn Yanagisawa  
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**REMARKS**

Claims 122-132, 140, and 142-154 are pending in the subject application. By this Amendment, applicants have amended claims 122-124, 132, 142-145 and 153. Accordingly, claims 122-132, 140 and 142-154 will be pending in the subject application upon entry of this Amendment.

In view of the arguments below, applicants maintain that the Examiner's rejections have been overcome, and respectfully request that they be withdrawn.

**Rejection Under 35 U.S.C. §112, Second Paragraph**

The Examiner rejected claims 122-132, 140, and 142-154 under 35 U.S.C. §112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

In response, but without conceding the correctness of the Examiner's rejection, applicants note that claims 142 and 143 have been amended as suggested by the Examiner to particularly point out and clearly state the claimed subject matter, thereby obviating the Examiner's rejection.

In view of these remarks, applicants maintain that claims 122-132, 140 and 142-154 satisfy the requirements of 35 U.S.C. §112, second paragraph.

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**Rejections Under 35 U.S.C. §103(a)**

The Examiner rejected claims 122-132, 140, and 142-154 under 35 U.S.C. §103(a), as allegedly unpatentable over Reed et al (U.S. Patent No. 5,876,939) as evidenced by Niethammer et al. in view of Kornau et al.

Specifically, the Examiner alleges that claims 121-132, 140, and 142-154, due to their allegedly indefinite nature, are interpreted as encompassing the Fas receptor as one of the signal-transducing proteins and FAP as one of the cytoplasmic proteins which may be used in the claimed methods. The Examiner alleges that Reed et al. disclose a method of identifying an agent that interferes with the ability of FAP to interact with Fas.

In response, applicants respectfully disagree and note that amended claims 142 and 143 do not recite a polypeptide that encompasses the Fas receptor.

To establish a *prima facie* case of obviousness, the Examiner must demonstrate three requirements with respect to each claim. First, the cited references, when combined, teach or suggest every element of the claim. Second, one of ordinary skill would have been motivated to combine the teachings of the cited references at the time of the invention. And third, there would have been a reasonable expectation that the claimed invention would succeed.

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In light of these requirements, applicants maintain that the cited references fail to support a *prima facie* case of obviousness for new claims 142 and 143.

Applicants maintain that none of the references cited by the Examiner, i.e. Reed et al., Niethammer et al., or Kornau et al., teaches methods using a polypeptide comprising an amino acid sequence selected from the group consisting of amino acid sequences as set forth in SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16. Furthermore, applicants note that none of the above sequences encompasses the Fas receptor. Accordingly, the cited references combined fail to teach each and every element of the claimed methods. Absent such teaching, there could not have been a motive to combine or a reasonable expectation of success.

In view of the above remarks, applicants maintain that the Examiner has failed to set forth a *prima facie* case of obviousness, and that amended claims 142 and 143, and their dependent claims, satisfy the requirements of 35 U.S.C. §103(a).

#### **Rejections Under 35 U.S.C. §101**

The Examiner rejected claims 122-132, 140, and 142-154 under 35 U.S.C. §101 as allegedly lacking utility because the disclosed invention is inoperative. Specifically, the Examiner alleges that the claims encompass using a signal transducing protein that has a peptide sequence selected from SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID

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NO:14, SEQ ID NO:15 and SEQ ID NO:16, but no such signal-transducing protein are known.

In response, but without conceding the correctness of the Examiner's rejection, applicants note that claims 142 and 143 have been amended to recite a "polypeptide comprising an amino acid sequence selected from the group consisting of amino acid sequences as set forth in SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16", thereby obviating the Examiner's rejection.

In view of these remarks, applicants maintain that claims 122-132, 140 and 142-154 satisfy the requirements of 35 U.S.C. §101.

**Rejections Under 35 U.S.C. §112, First Paragraph**

The Examiner rejected claims 122-132, 140, and 142-154 under 35 U.S.C. §112, first paragraph as allegedly not enabled for the reasons stated in the 35 U.S.C. §101 rejection.

In response, but without conceding the correctness of the Examiner's rejection, applicants again note that claims 142 and 143 have been amended to recite a "polypeptide comprising an amino acid sequence selected from the group consisting of amino acid sequences as set forth in SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16", thereby obviating the Examiner's rejection.

The Examiner also rejected claims 122-132, 140, and 142-154 under 35 U.S.C. §112, first paragraph as allegedly containing

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subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that applicants had possession of the invention.

Specifically, the Examiner alleges that the December 23, 2004 amendments have introduced new matter into the claims by reciting a signal transducing protein that has a peptide sequence selected from SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16.

In response, but without conceding the correctness of the Examiner's rejection, applicants again note that amended claims 142 and 143 recite a "polypeptide comprising an amino acid sequence selected from the group consisting of amino acid sequences as set forth in SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16", thereby obviating the Examiner's rejection.

The Examiner also rejected claims 122-132, 140, and 142-154 under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that applicants had possession of the invention.

Specifically, the Examiner alleges that the genus of signal transducing proteins comprising a peptide selected from the group consisting of amino acid sequences as set forth in SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16 is not supported by the disclosure.

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In response, but without conceding the correctness of the Examiner's rejection, applicants again note that amended claims 142 and 143 do not recite the language objected to by the Examiner, and thereby obviate the Examiner's rejection.

In view of the remarks above, applicants maintain that claims 122-132, 140, and 142-154 satisfy the requirements of 35 U.S.C. §112, first paragraph.

### Conclusion

For the reasons set forth hereinabove, applicants respectfully request that the Examiner reconsider and withdraw the rejections, and solicit allowance of the pending claims.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorneys invite the Examiner to telephone them at the number provided below.

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No fee is deemed necessary in connection with this Amendment.  
However, if any fee is required, authorization is hereby given  
to charge the amount of such fee to Deposit Account No. 03-  
3125.

Respectfully submitted,



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6/8/01  
Date